

protocol providing for a data packet structure having a payload that is based upon audio data typically encoded at a first bitrate, the method comprising the steps of:

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encoding the digitized audio data at a second bitrate, whereby the second bitrate is lower than the first bitrate;

generating an error detection code derived from the digitized audio data;

forming a data packet with modified payload information comprised of the audio data encoded at the second bitrate and the error detection code;

transmitting the data packet via the wireless communications link.

25. (Once Amended) A method of forming a data packet for the transmission of a digital audio signal using a packet-based synchronous connection-oriented BLUETOOTH communication link, which link is capable of transmitting audio data typically encoded at a first bitrate within payload portions of a plurality of data packets, the method comprising the steps of:

encoding the digital audio signal at a second bitrate, where the second bitrate is lower than the first bitrate;

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generating an error detection field derived from the digital audio signal;

forming the data packet with the payload portion comprising the digital audio signal encoded at the second bitrate and the error detection field.

26. (Once Amended) A method for transmitting a digitally encoded audio signal from a first wireless device having a transmitter to a second wireless device via a BLUETOOTH asynchronous connectionless link, which method comprises the steps of:

receiving a first portion of encoded audio signal at the transmitter of the first wireless device;

generating an error detection code derived from the first portion of encoded audio signal;

generating a data packet having a payload comprised of the first portion of encoded audio signal and the error detection code;

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cont transmitting the data packet from the first device to the second device via the asynchronous connectionless link;

flushing the asynchronous connectionless link approximately when the first device transmitter receives a second portion of encoded audio signal for transmission to the second wireless device.

33. (Once Amended) A method for communicating a digitally encoded audio signal from a first wireless device to a second wireless device via a BLUETOOTH wireless communications link, which method comprises the steps of:

receiving a first portion of an encoded audio signal comprised of a plurality of data subsets by the first wireless device;

B3 generating an error detection code derived from the received encoded audio signal which independently protects each one of a plurality of data subsets within the first portion of encoded audio signal;

generating a data packet comprised of the first portion of encoded audio signal and the error detection code;

transmitting the data packet from the first device to the second device via the wireless communications link;

determining for each of the plurality of data subsets whether the data subset was received with uncorrectable errors using the error detection code;

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discarding only the contents of each data subset received with uncorrectable errors.

35. (Once Amended) An apparatus for transmitting digitized audio data from a first wireless device to a second wireless device using a packet-based BLUETOOTH wireless communications protocol, which apparatus is comprised of:

a digital audio encoder disposed within the first wireless device capable of generating the digitized audio data using one of at least a first and second encoding algorithm, where the first encoding algorithm encodes data at a first bitrate, and the second encoding algorithm encodes data at a second bitrate, where the second bitrate is lower than the first bitrate;

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a first link manager associated with the first wireless device which processes the digitized audio data to generate a data packet payload, where the operation of the link manager depends upon the encoding algorithm implemented by the digital audio encoder, which link manager generates error detection data derived from the digitized audio data and associates the error detection data with the digitized audio data when the digital audio encoder implements the second encoding algorithm, such that the cumulative length of the error detection data and the digitized audio data encoded when using the second encoding algorithm is less than or equal to the length of the audio data had it been encoded using the first encoding algorithm;

a packet encoder which inserts the packet payload into a data packet having a payload field of predetermined length;

a radiofrequency transmitter associated with the first wireless device which transmits the data packet via a wireless communication link;